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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/827,479	04/19/2004	Hyungsoo Choi	22010-209	3302

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EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

MAIL DATE	DELIVERY MODE
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05/16/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/827,479

Applicant(s)

CHOI, HYUNGSOO

Examiner

Marc S. Zimmer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/19/06 and phone interview on 05/02/0.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 74-88 is/are pending in the application.
- 4a) Of the above claim(s) 74 and 77-88 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 76,77 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 74 and 77-88, drawn to an integrated circuit device comprising a film derived from certain methods, classified in class 428, subclass 689.
- II. Claims 76 and 77, drawn to a method of making a metal powder, classified in class 427, subclass 446.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are directed to related article of manufacture and process only inasmuch as they rely on the employment of the same precursor materials. The related inventions are distinct if the (1) the inventions as claimed are either not capable of use together or can have a materially different design, mode of operation, function, or effect; (2) the inventions do not overlap in scope, i.e., are mutually exclusive; and (3) the inventions as claimed are not obvious variants. See MPEP § 806.05(j). Clearly, the precursor materials recited by the claims have multiple applications which are distinct in the way that the precursor material is utilized. Furthermore, the inventions as claimed do not encompass overlapping subject matter and there is nothing of record to show them to be obvious variants.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

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During a telephone conversation with Edward Sowers on May 2, 2007 a provisional election was made without traverse to prosecute the invention of group II, claims 76 and 77. Affirmation of this election must be made by applicant in replying to this Office action. Claims 74 and 77-88 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Claim Analysis

The Examiner feels compelled to advise Applicant that, in his estimation, the claims do not embrace the employment of metal phosphites as a precursor insofar as the formula does not aptly disclose these permutations of the phosphorus-based ligand. It is noted that in U.S. Patent # 6,777,565, which is commonly assigned, this same formula is disclosed in claim 1 and claim 2 is purported to limit claim 1 by requiring that the compound of formula 1 is one of numerous metal phosphite complexes. However, had the present Examiner been reviewing that Applicant, he would have held claim 2, and others, as rejected because they lacked proper antecedent basis in claim 1.

This, of course, is not to suggest that Applicant is unable to pursue protection of these embodiments of the invention. Instead, Applicant is merely being advised of the Examiner's treatment of the claim so that they may make necessary amendments to include the disclosure of a metal phosphite complex in claim 76.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 76 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. As the Examiner understands the instant invention, Applicant is preparing a metal product that entails (i) dispersing a vapor/liquid comprising an organometallic precursor that adheres to the formula provided in line 6 of the claim, and wherein the variables are defined thereafter, and (ii) subjecting the aforementioned precursor to thermal degradation via spray pyrolysis thereby yielding the desired product. As the invention is presently claimed, it is not at all clear what precisely brings about chemical modification of the precursor. Given their broadest reasonable interpretation, the medium could comprise a reactant, e.g. a reducing agent, that reacts with the precursor to yield the claimed product. (It is acknowledged that this is not what is contemplated by the Specification but Applicant should be apprised of what the Examiner believes that their claims could embrace.)

It appears that the most straightforward remedy to this matter is for Applicant to expound on their claimed method by delineating exactly what is the source of chemical modification. Claim 77 hints at what occurs but the Examiner encourages Applicant to describe in even more affirming language how the product is realized, i.e. by inserting mention of a step wherein the precursor dispersed in a medium is subjected to spray pyrolysis or another degradation approach if another is supported by Applicant's original disclosure.

Allowable Subject Matter

Claims 76 and 77 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Hampden-Smith et al., U.S. Patent Application Publication No. 2003/0198849 describe in this document, and perhaps a couple of dozen others, the preparation of metal oxide powders by thermal degradation of different classes of metal compound including metal phosphine and phosphite complexes (paragraph 182). There is however, no description of these compounds other than the characterization provide in paragraphs 182 and 183. While the reference may disclose a genus of compounds to which the precursors of the instant invention belong, the preferred members of that genus, which is quite large, are not delineated nor does the prior art seem to indicate why it would have been obvious to select from said genus the particular complexes with ligands R¹ stipulated by the claims.

Outside of the family of related disclosures authored by Hampden-Smith, the Examiner did not encounter any similar methods that employ the precursors mentioned in Applicant's claims. Therefore, these claims are allowable pending resolution of the 35 U.S.C. 112, 2nd paragraph rejection outlined herein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

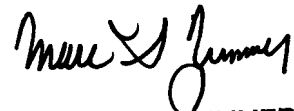
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

May 14, 2007


MARC S. ZIMMER
PRIMARY EXAMINER